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FIG. 1A

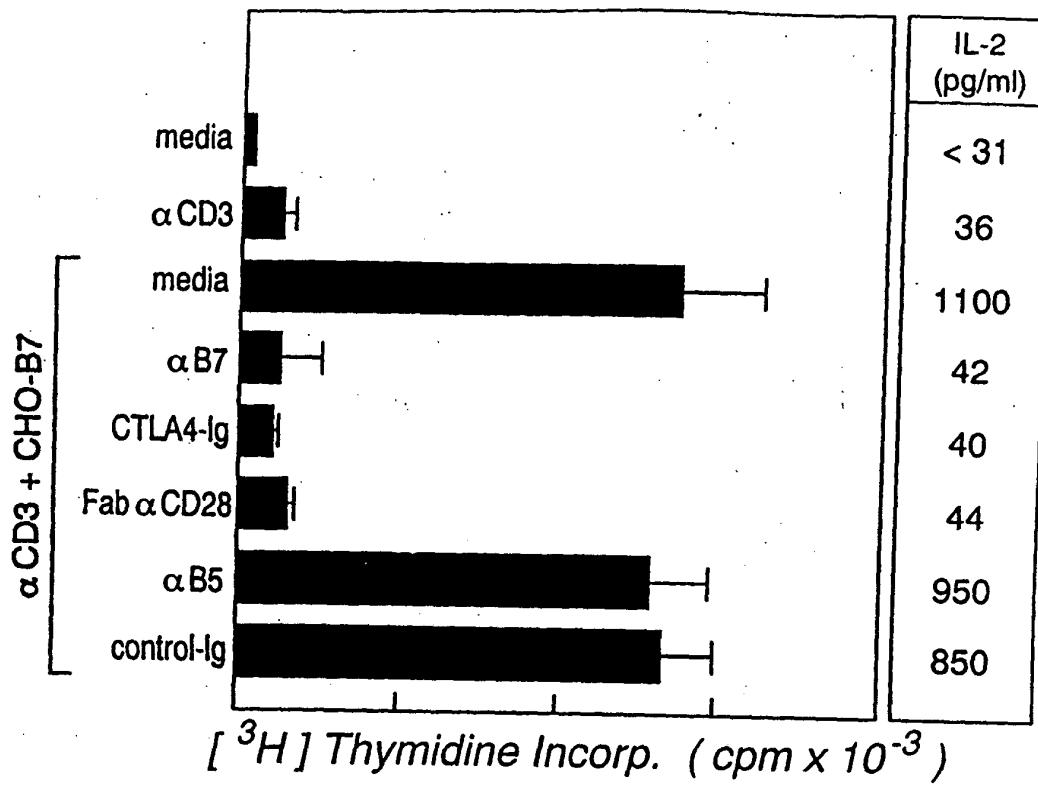
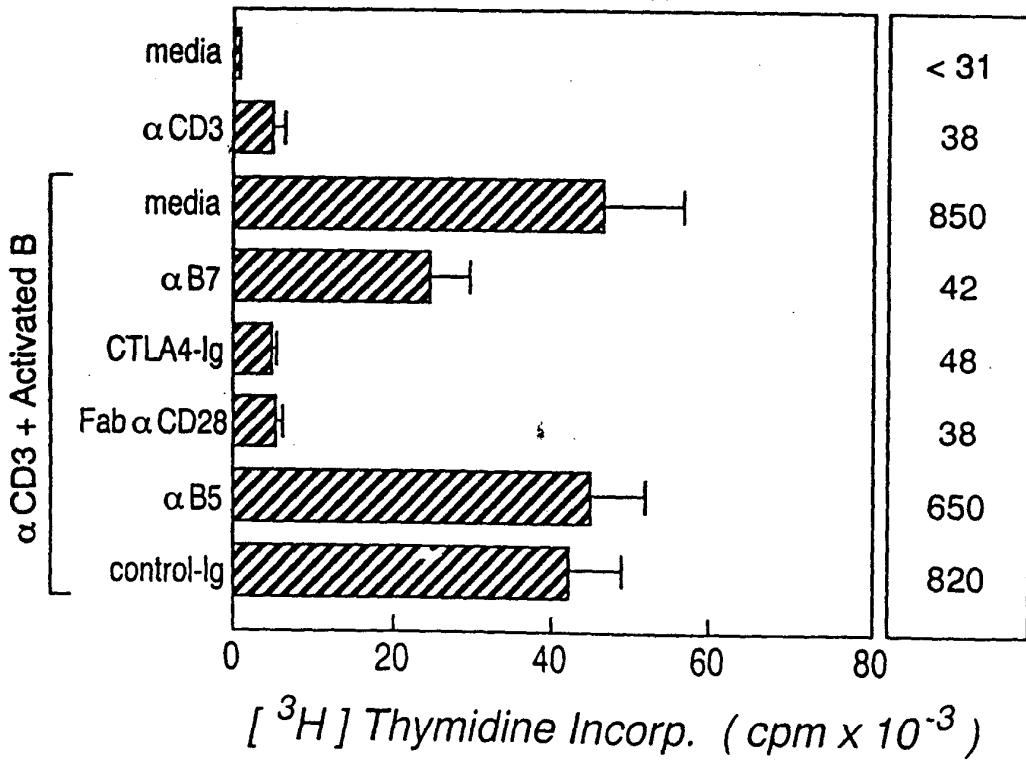


FIG. 1B



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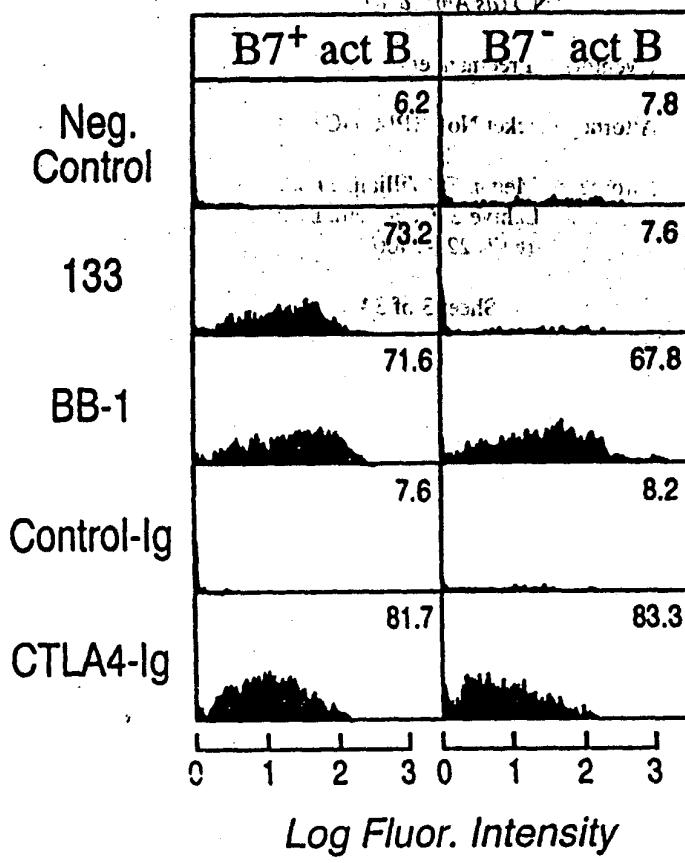


FIG. 4

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B Cells Activated by sig Crosslinking

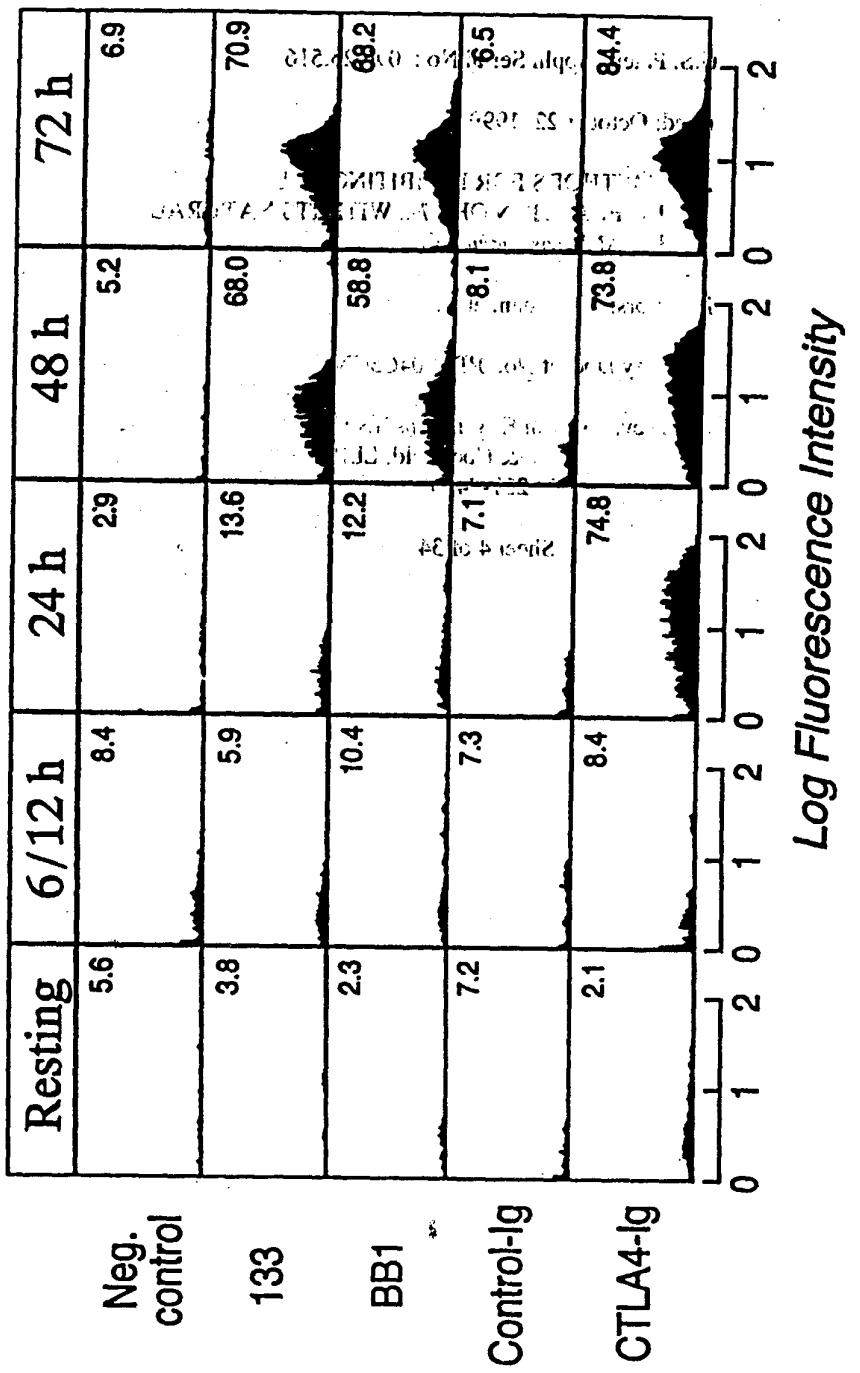


FIG. 5

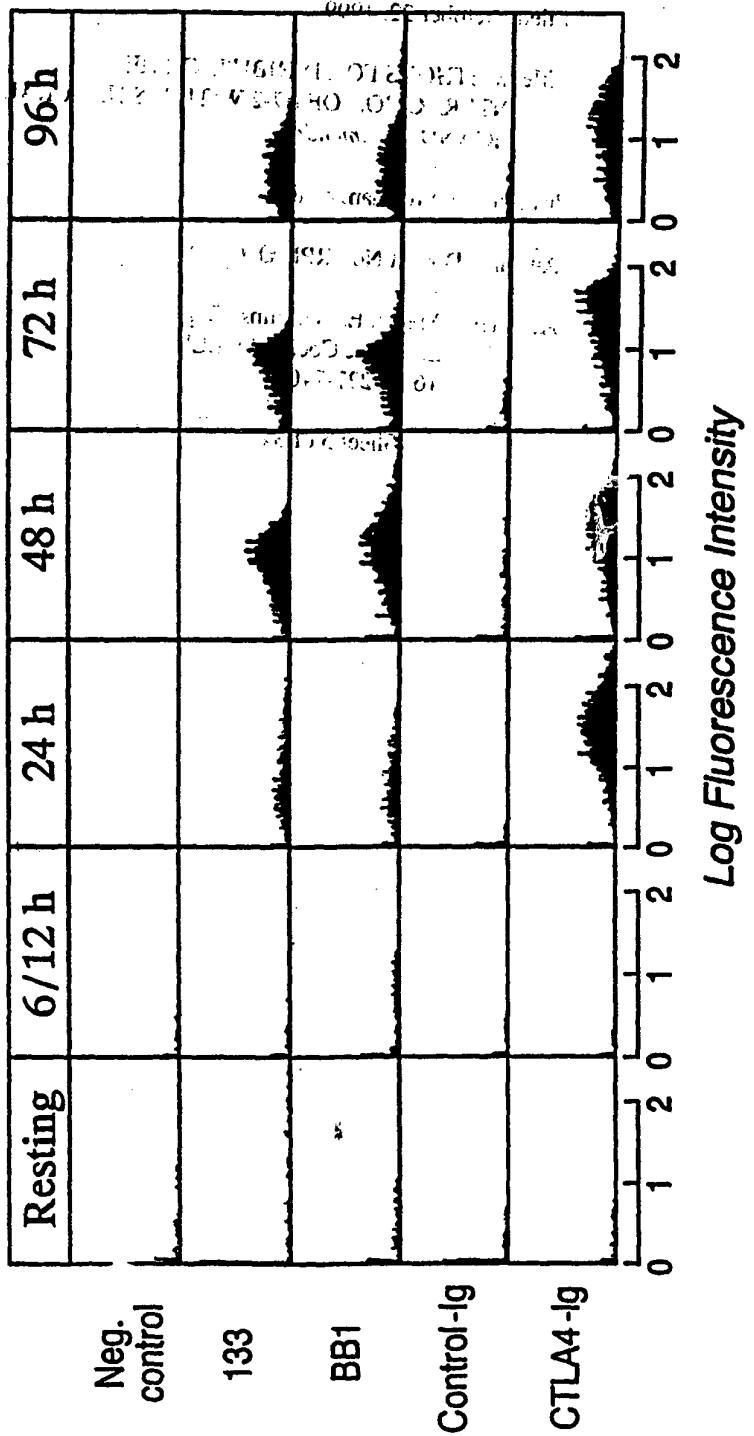
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FIG. 6

B Cells Activated by Class II Crosslinking





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FIG. 8A

1 CACAGGGTGAAGCTTTGCTTCTGCTGTAACAGGGACTAGCACAGACACACGGATGACTGGGCTC 70  
71 ATTTCAGATATTAGGTACACGGAGCCAAATGGATCCCCAGTGGCACTATGGACTGAGTAACAA 140  
M D P Q C T M G L S N I I  
210  
141 TTTCTCTTTGTGATGGCCTTCCTGCTCTCTGGTGTGCTCTGCTGAAGATTCAAGCTTATTCAATGAGACT 210  
12 I L F V M A F L L S G A A P L K I Q A Y F N E T 35  
\*  
211 TGCAGACCTGCCATGCCAAACTCTCAAAACCAAAAGCCTCAGTCAGCTAGCTAGTAGTATTGGCAAG 280  
36 A D L P C Q F A N S Q N Q S L S E L V V M F W Q 58  
\*  
281 GACCAGGAAACTTCTGAATGAGGTATACTTAGGCAAGAGAAATTGACAGGTGTTCAATTCCAAGT 350  
59 D Q E N L V L N E V Y L G K E K F D S V H S K 81  
351 ATATGGGCCGCAAGTTGATTGGACAGTTGGACCTGAGACTTCACAATCTTCAGATCAAGGACAA 420  
82 Y M G R T S F D S D S W T L R L H N L Q I K D K 105



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FIG. 8B

421 GGGCTTGTATCAATGTTATCCATCACAAAGCCACAGGAATGATTGGCATCCACAGATGAAATTCT 490  
106 G L Y Q C I I H H K K P T G M I R I H Q M N S 128  
  
491 GAACTGTCAGTCAGTCAACTTCAGTCACCTGAAATTAGTACCAATTCTTAATAACAGAAAATGTGT 560  
129 E L S V L A N F S Q P E I V P I S N I T E N V 151  
#  
  
561 ACATAAATTGACCTGCTCATCTATAACCGTTACCCAGAACCTTAAGAACATGAGTGTGTGCTAAGAAAC 630  
152 Y I N L T C S S I H G Y P E P K K M S V L L R T 175  
#  
  
631 CAAGAAATTCAACTATCGACTATGATGTTGCTTATATGCGAGAAATCTCAAGATAATGTCACAGAAACTGTACGGAC 700  
176 R N S T I E Y D G I M Q K S Q D N V T E L Y 798  
#  
  
701 GTTTCATCAGCTTGTCTGTTTCAATTCCCTGATGTTACGAGCAATATGACCCATCTCTGTATTCCTGAA 770  
199 V S I S L S V S F P D V T S N M T I F C I L E 221  
#  
  
771 CTGACAAAGACGGGGCTTTATCTTCACCTTCTGAGGCTTGAGGCTCCAGCCTCAGGACCCAGACCA 840  
222 T D K T R L L S S P F S I E L E D P Q P P D H 245



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FIG. 8C

841 CATTCCCTGGATTACAGCTGTACTTCCAACAGTTATTATGTTGATGGTTTTCTGTCTAATTCTATGG 910  
246 I P W I T A V L P T V I I C V M V F C L E I W 268

911 AA.TGGAAGAAGAAGAAGCGGGCTCGCAACTCTTATAAATGTTGAAACCAACACAATGGAGAGGGAAAGAGA 980  
269 K W K K R P R N S Y K C G T N E T M E R E K E 291

981 GTGAAACAGACCAAGAAAAGAGAAAATCCCATATACCTGAAAGATCTGATGAAAGCCCAAGCCGCTTNTTAA 1050  
292 S E Q T K K R E K I H I P E R S D E R Q R V F K 315

1051 AAGTCGAAGACATCTTCATGGGACAAAAGTGTACATGTTTTAATTAAAGAGTAAAGCCCAAAAAAAA 1120  
316 S S K T S S C D K S D T C F \* 329

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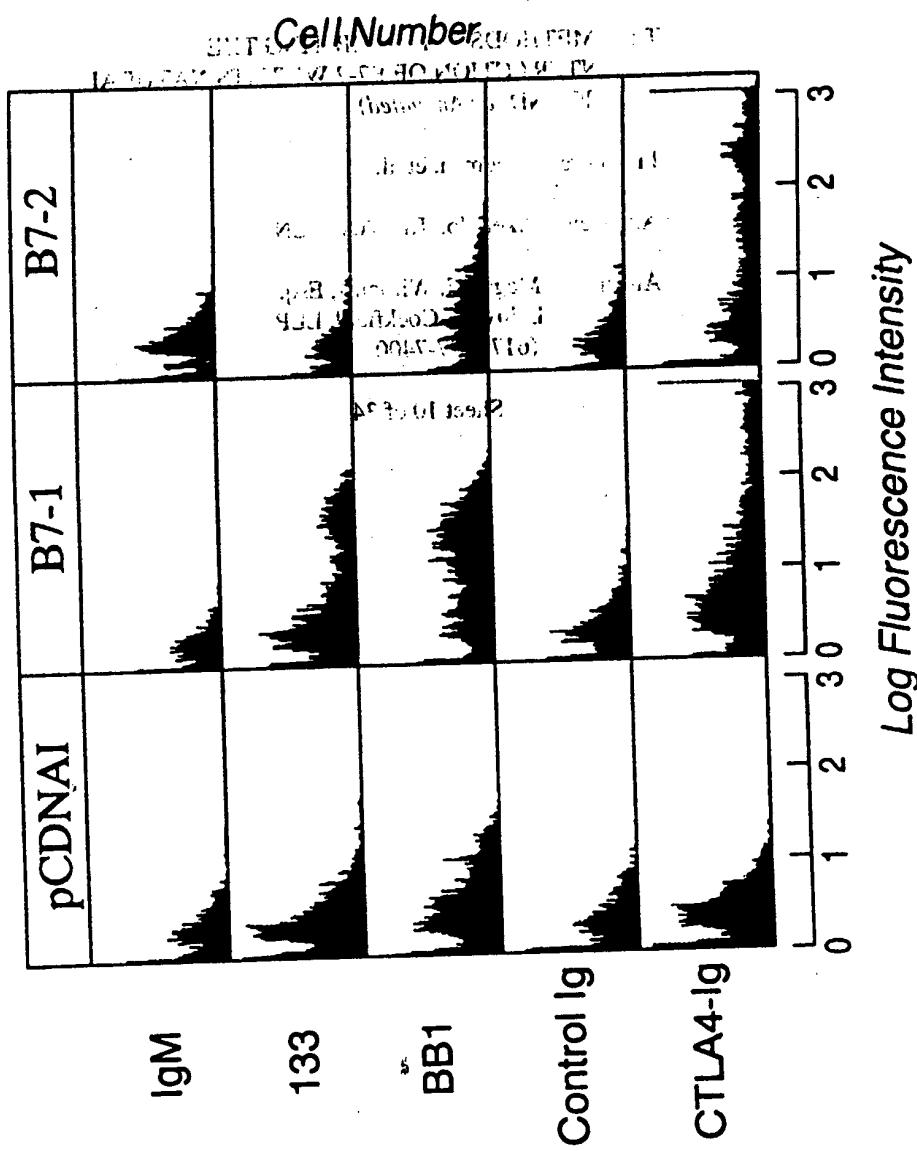
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FIG. 9



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FIG. 10A

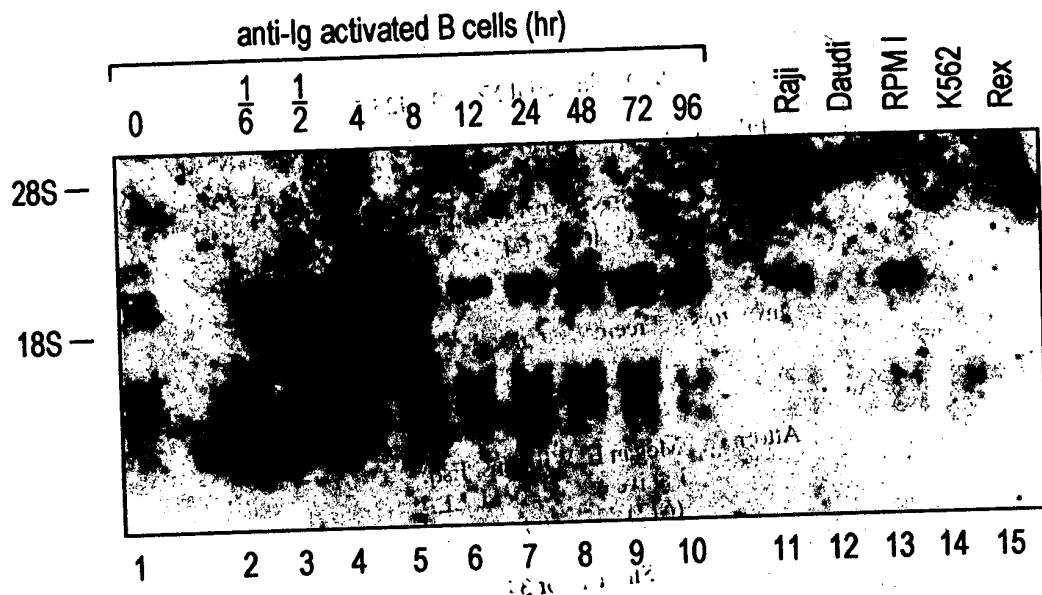
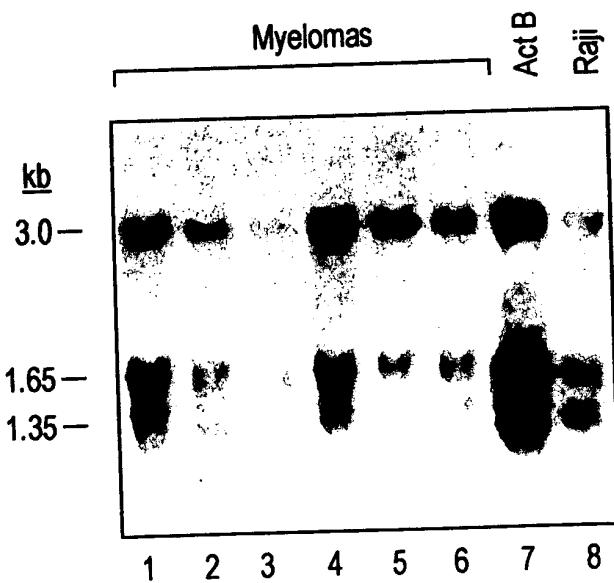


FIG. 10B



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FIG. 11A

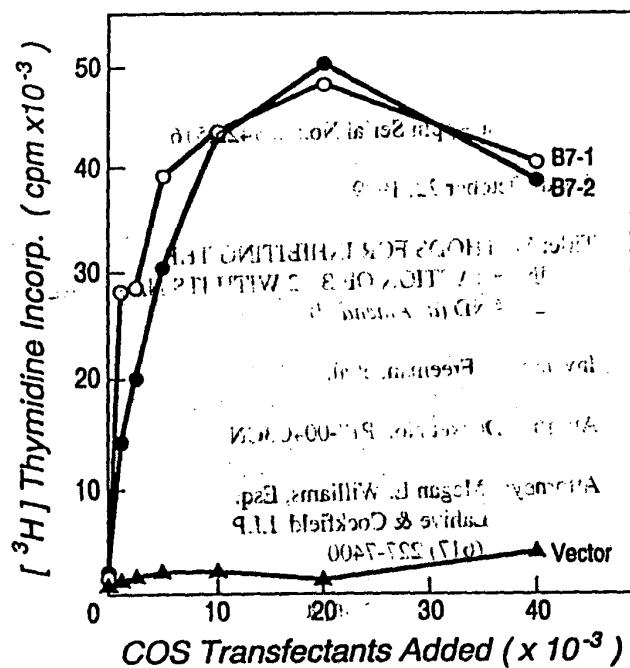
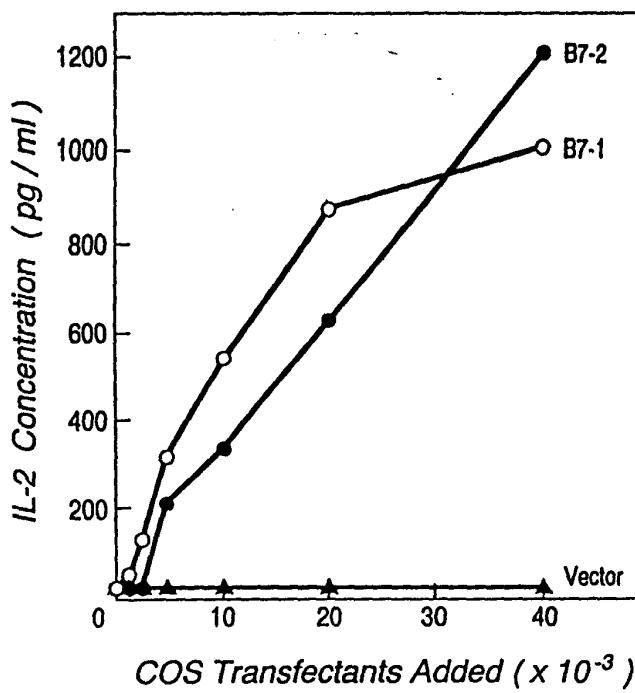


FIG. 11B

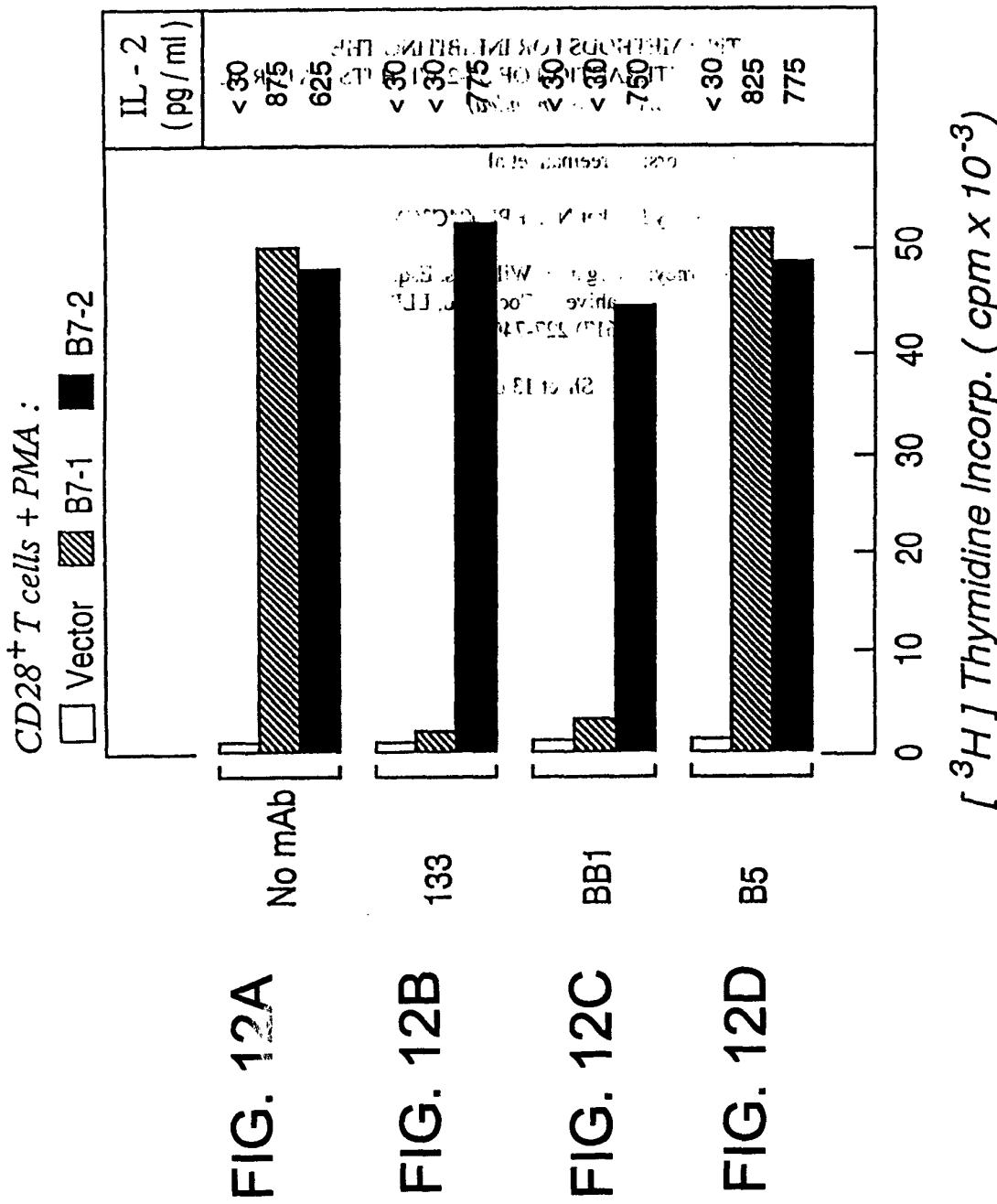




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CD28<sup>+</sup> T cells + PMA :

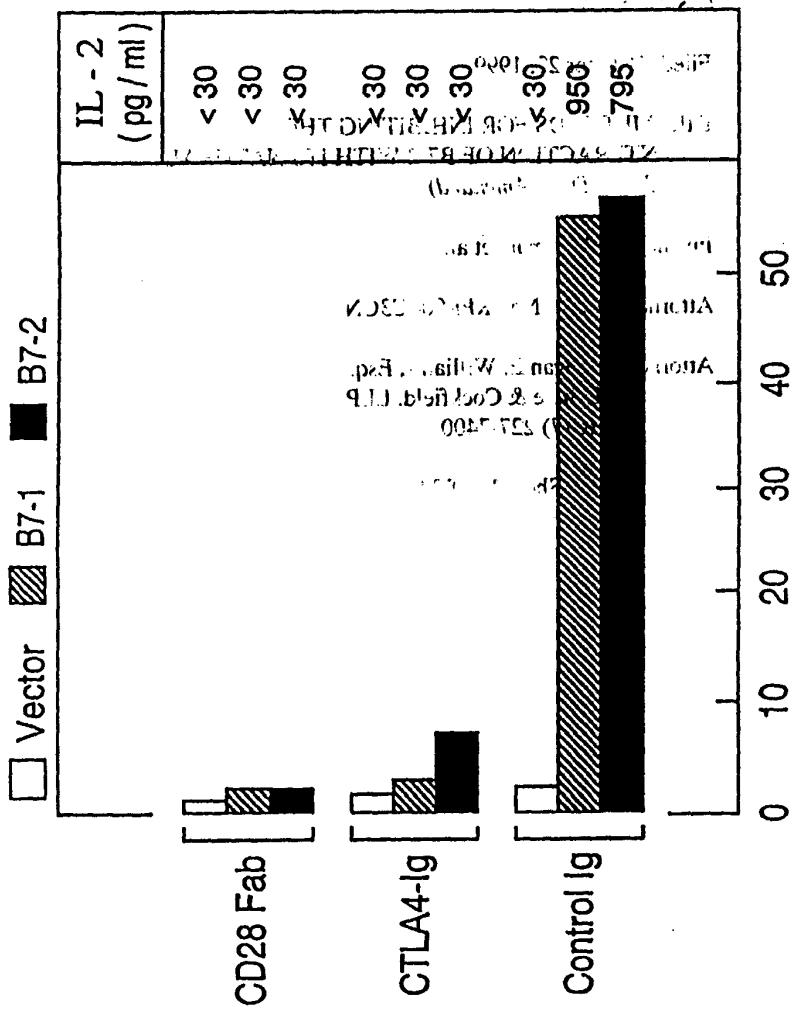


FIG. 12E

FIG. 12F

FIG. 12G

[<sup>3</sup>H] Thymidine Incorp. ( cpm x 10<sup>-3</sup>)



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## FIG. 13A

hB7-1	1 M.. GHTRRQGTSPSKCPYLNFFQLLV.LAGLSHFCSSV.IHTKERVVA	46
hB7-2	1 M... DPQCTMGLSN... .ILFVMAFLLSGA... APLKIQAYFNETA	36
mB7	1 MACNCOLMQDTPLLKFPCLPLLFLVLLFLLRILSQQVSSDVDEQLSKSVKDKV	50
.		
hB7-1	47 TLSCGHNVSVEE.IAQTRIYWQKEKXAVLT.MMSGDMNI... WPEYKQRT	891
hB7-2	37 DLPCQFANSQNQSLSELVVFWDQENLVLNEVYIGKEKFDSVHSKEMGRT	86
mB7	51 LLPCRY.NSPHEDESDRIYWQKHDKVYES.YTACKRKY... WREYKRT	95
.		
hB7-1	92 IFDITNNLSIVIALRPSDEGTYECVLKYEKDAFKREHEAVTILSVKAD	141
hB7-2	87 SFD.SDSWTLLHNLQIKDKGLYQCIIIHHKKPTGMIRIHQMNSELSTVLAN	135
mB7	96 LYDNTT.YSLIILGLVLSDRGTYSCVYQKKERGTYEVKHLALVKLSIKAD	144
.		
hB7-1	142 FPTPSISDFEIPTSNI.RRIICSTSGGFPEPH... LSWLENGEELMAIN	186
hB7-2	136 FSQPEIVPISNITENVYINLTCSISIHYGYPEPKMSVLLRTKNSTIEYDGI	185
mB7	145 FSTPNITESGNPSADT.KRITCFASGGFPKPR... FSWLENGRELPGIN	189
.		



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## FIG. 13B

HB7-1	187	TTVSQDPETELYAVSSKLDEN...	MTTNHSFMCLIKYGHLRVNQTNWNT	233
HB7-2	186	MQKSQDNVTELYDVSISLSVSFPDVTSNMTFCILETDKTRLLSSPFSSIE	235	
HB7	190	TTISQDPESELYTISSQLDEN...	TTRNHTIKCLIKYGDAHVSDFTWEK	236
HB7-1	234	TKQEHF.PDNLLPSWAITLISVNGIFVICCLTYCFAPRCRERRNTERLRR	282	
HB7-2	236	LEDPQPPPDHIPWITAVLP...	TVIICVMVECLILMKWKKKRBRNSY	280
HB7	237	PPEDPPDSKNTLVLFGAGFGAVITVVVIIKCFCKRSCKERNDA.SR	285	
HB7-1	283	ESVRPV*		288
HB7-2	281	KCG...	TNTMERESESEQTKREKIHIPERSDEAQRVFKSSSKTSSCDKSDT	327
HB7	286	ETNNSLTFGPEEALLAEQTVFL*		306
HB7-2	328	CG*		329



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FIG. 14A

1 CCCACGGCTCGGGAGCAAGCAGCTGGTAAAGAGTGGCTCCGTAGGGACCTTG  
 61 GGGTGGCAGGCCCTCGTCTCGTCAACGGGACATTCACGGGACTCGCTGAAAC  
 111 AACAAACGACTCCTGTAGACGTGTTCCAGAACTTACGGAAGGCCACGATGGACCCCA  
 161 TTGTGGTCTGAGGACATCTGCACAAAGGTCTGAATGCCCTCTGGCTTACCTGGGGT  
 211 M D P R N  
 261 GATGCCACATGGCTGGCAATCCTTATCTTGTGACAGTCTTGCTGATCTAGATGCTG  
 311 CTACGTGGTACCCGAACCGTTAGGAATAGAAACACTGTCAAGAACGACTAGAGTCTACGAGC  
 361 C T M G L A I L I F V T V S L T I S D A V  
 411 TTAACGTGGAGACGCCAAAGCTTATTCAATGGGACTGCAATATCTGCCGTTGCCATTACAA  
 461 AAGGCACCTCTGGTCTGGTCAATAAAGTTACCTGTACGGTATAAGACGGCAGGGTAATGTT  
 511 S V E T Q A Y F N G T A Y L P C P F T K  
 561 AGGCTCAAAACATAAGCTGTAGGTGAGCTGGTAGTATTGGCAGGACCAAAAGTGG  
 611 TCCGAGTGTGTGATTCGACTCACTCGACCATCATAAACCGTCTGGTCCGTTCAACC  
 661 A Q N I S L S E L V V F W Q D Q K L V -



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FIG. 14C

CGAACCTAACGAGATGTTATTCTGATAACTAACATTCAACTAACATTGAGTATGGTGATAACA  
601  
GCTTGGATTCTTCTACATAAAAGACTATTGATTAAGTGTATTACTACACCACTATTG  
660  
TGCAGATATCACAAAGATAATGTCACAGAACTGTTCAAGTATCTCCAAACAGCCTCTCTCT  
661  
ACGTCTATAGTGTCTATTACAGTGTCTTGAACAGTCATAAGGTTGTCGGAGAGAGAA  
720  
Q I S Q D N V T E L F S I T S N S L S L  
CATTCCGGATGGTGTGGCATATGACCGTTGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT  
721  
GTAAGGGCTACCAACACCGTATACTGGCAACACACACAAAGACCTTGCCTCAGTTAC  
780  
F P D G V W H M T V V C V L - E T E S M X  
AGATTCTCCAAACCTCTCAATTCACTCAAGAGTTCCATCTCTCAAAACGTTATTGGA  
781  
TCTAAAGGAGGTTGGAGAGTTAAAGTGAAGTCTCAAAAGTAGGGAGGTTGCTAAACCT  
7840  
I S S X P L N F T Q E F P S P Q T Y W K -  
AGGAGATTACAGCTTCAGTTACTGTTGGCCCTCCTCCCTGATGCTGCTCATCTATTGAT  
841  
TCCTCTAAATGTCGAAGTCATGACACCCGGAGGGAGGAAACACTACGACGAGTAGTAAACATA  
900  
E I T A S V T V A L L L V M L L I I V C -



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FIG. 14D

901 GTCACAGAACGGCGAATCAGGCCCTAGCAGGCCAGGAAACACAGCCTTAAGTAGCCGGG  
960 CAGTGGTCTTCGGCTTAGTCGGATCGTCGGTGTGGAGATTCAATCTCGCCC  
H K K P N Q P S R P S N T A S K L E R D -  
ATAGTAAACGCTGACAGAGACTATCAACCTGAAAGGAACCTGAAACCCCAAATTGCTTCAG  
961 TATCATTGGACTCTGTCTGATAGTTGGACTTCCTTGAACCTGGGTTAACGAAGTC  
1020 S N A D R E T I N L K E L E P Q I A S A  
CAAAACCAATTGGCAGAGTGAAGGGCAGTGAGAGGCCTGAGGAAGGTTAAATTGCTTG  
1080 GTTTGGTTAACGGTCTCACTTCCGTTCACTCTGGACTCTTCATTAAACGAAAC  
R P N A E \*  
CCTGAATAAGAAAGTGGAGGTTCTCAGAATTCAAAATGTTCTCACTGATTGGAATT  
1081 GGACTTTATTCTTCAGGTCTCACGTCTCAAGAGTCTTAAGTTTACAAAGAGTCGACTAACCTTA  
1141 CTACAGTTGAATAATTAAAGAAC 1163  
1163 GATGTCAACTTATTAAATTCTTG



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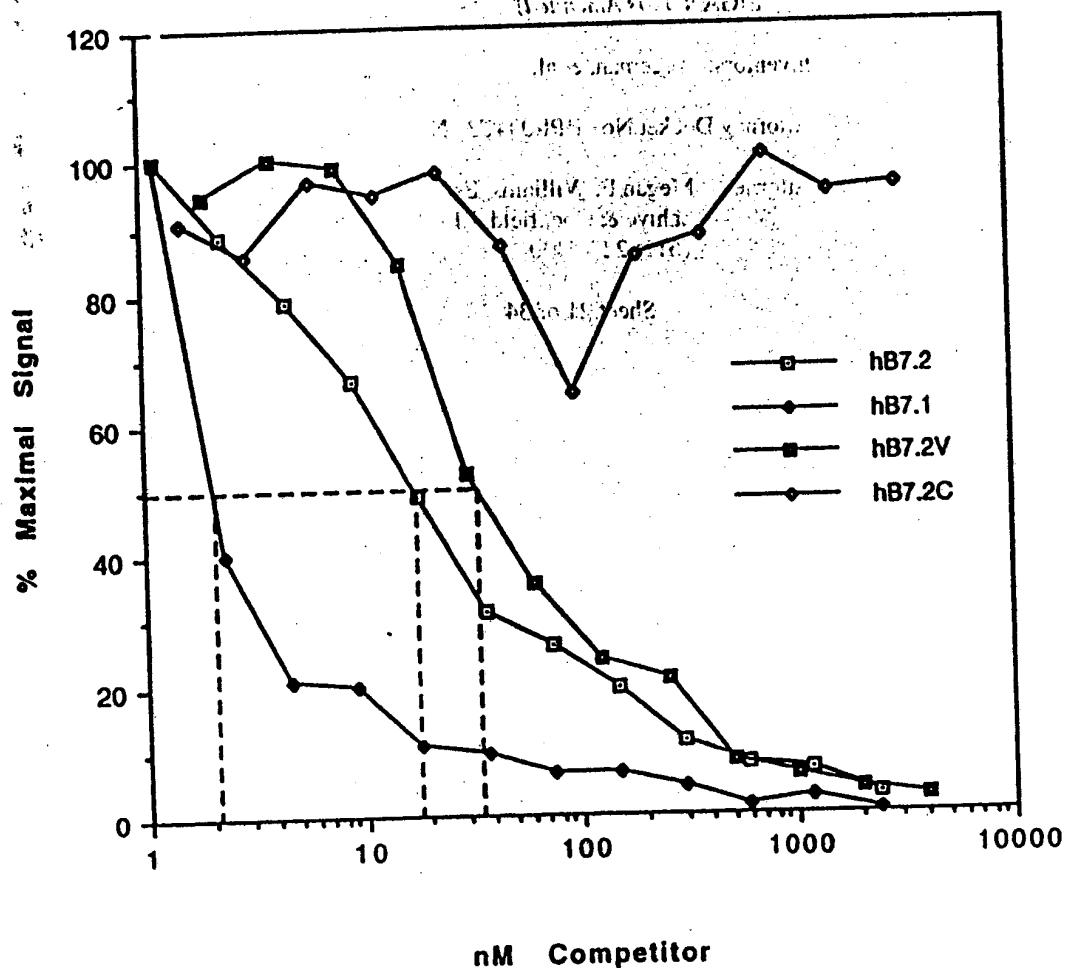


FIG. 15



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FIG. 16A

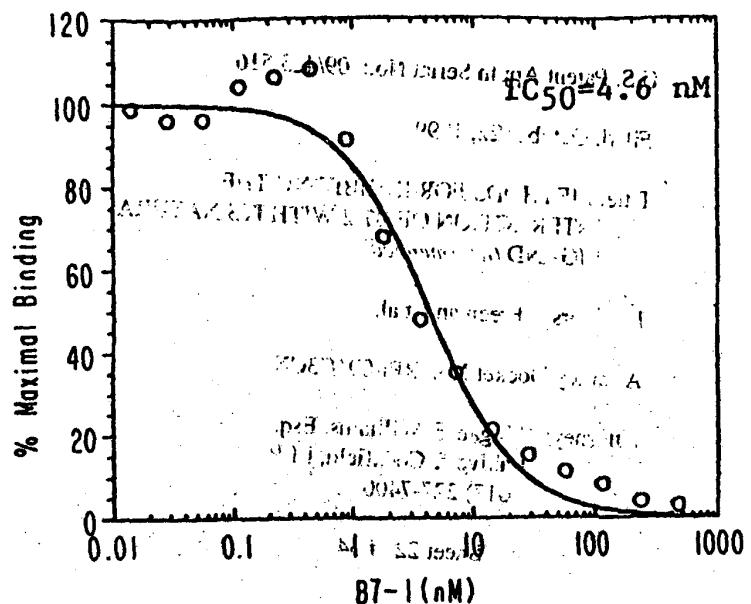
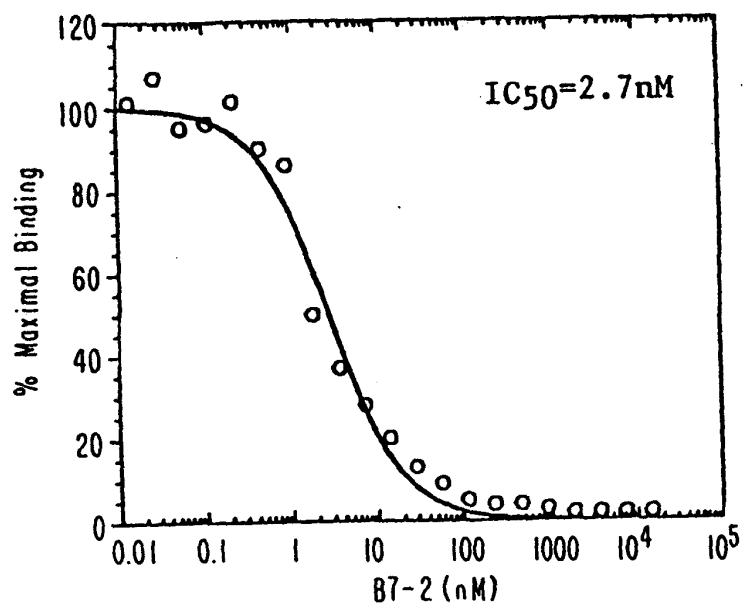


FIG. 16B





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FIG. 17B

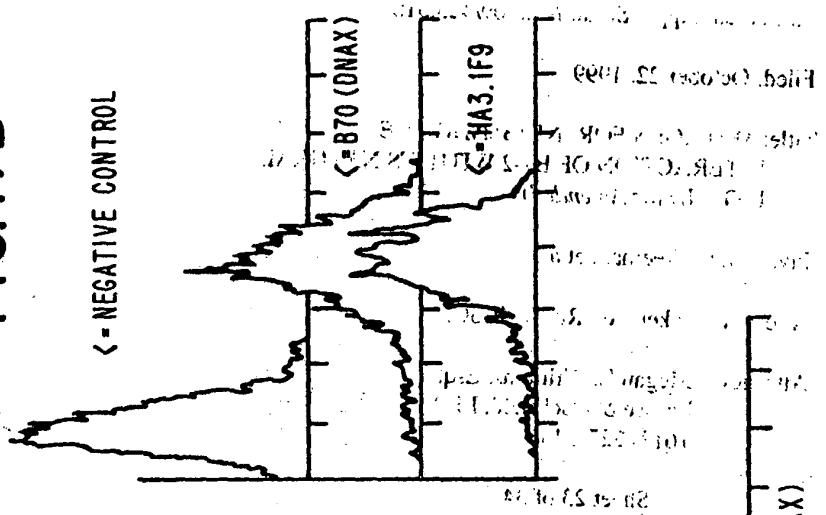


FIG. 17A

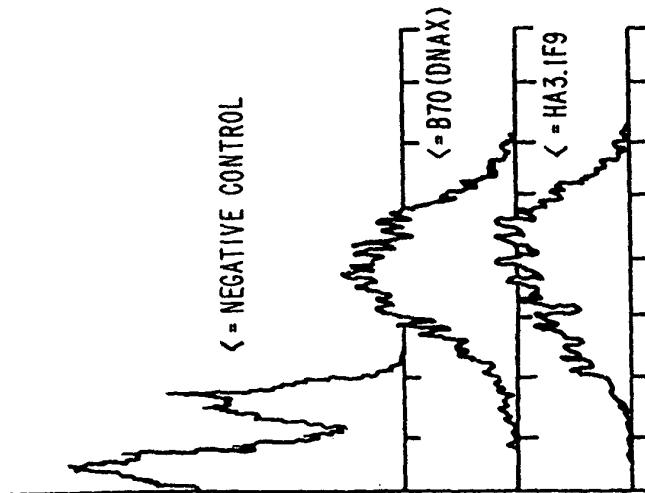
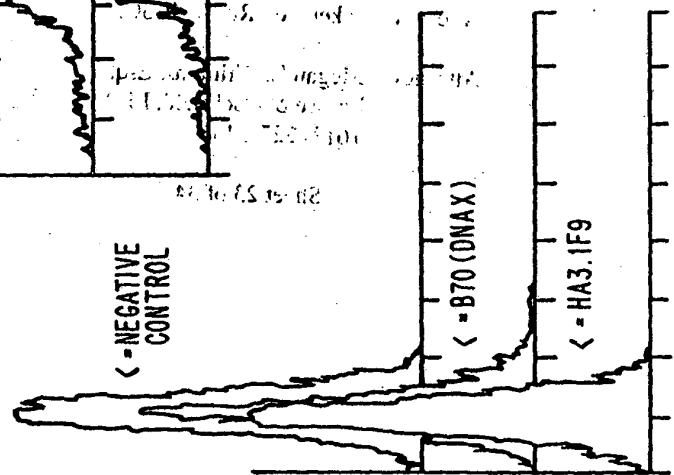


FIG. 17C





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FIG. 18A

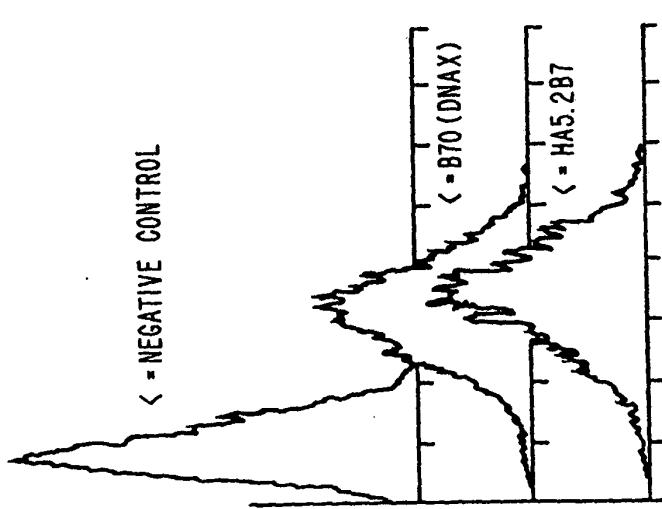


FIG. 18B

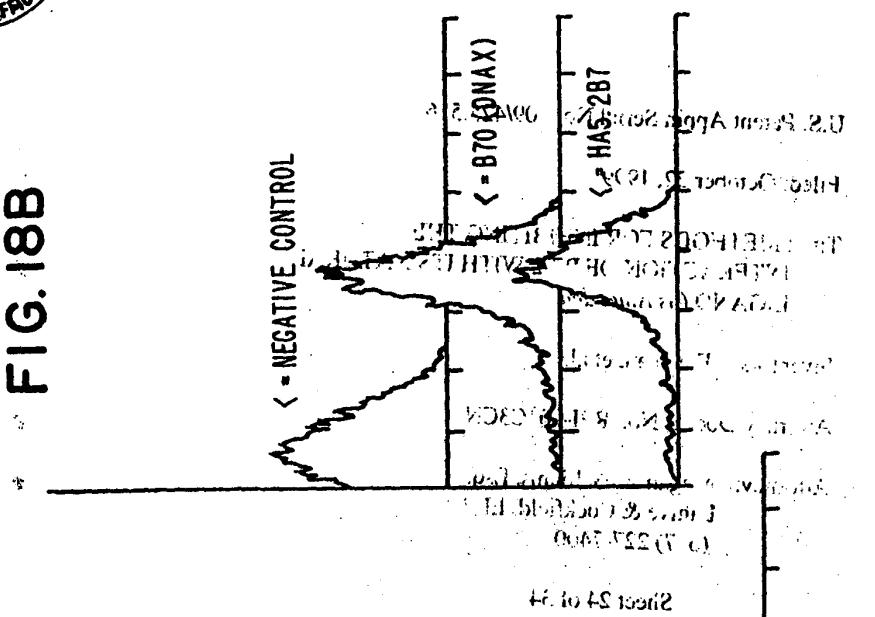
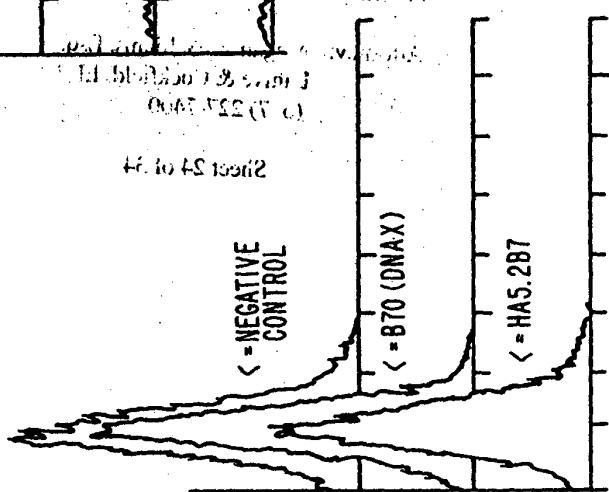


FIG. 18C



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FIG. 19A

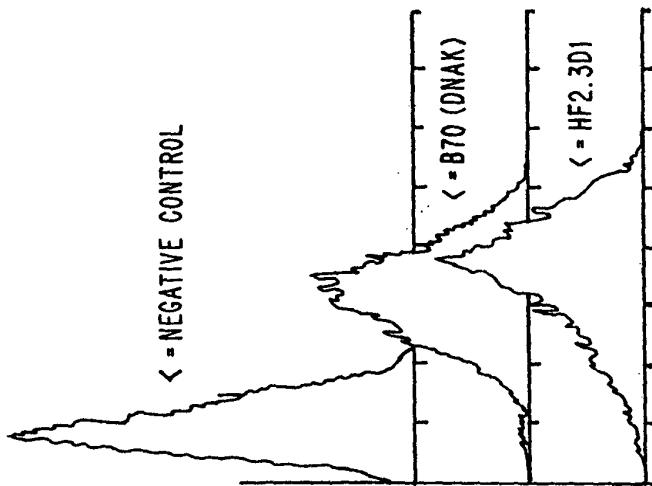


FIG. 19B

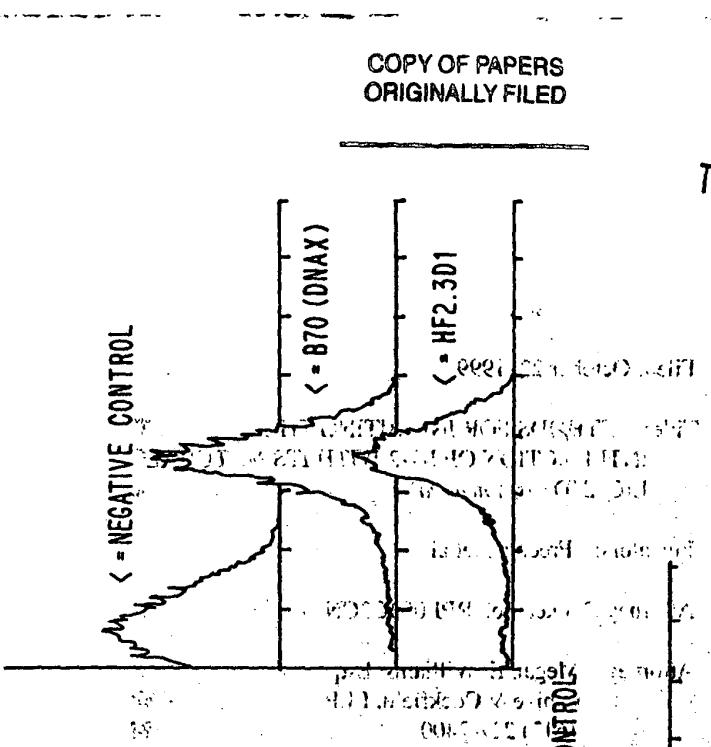
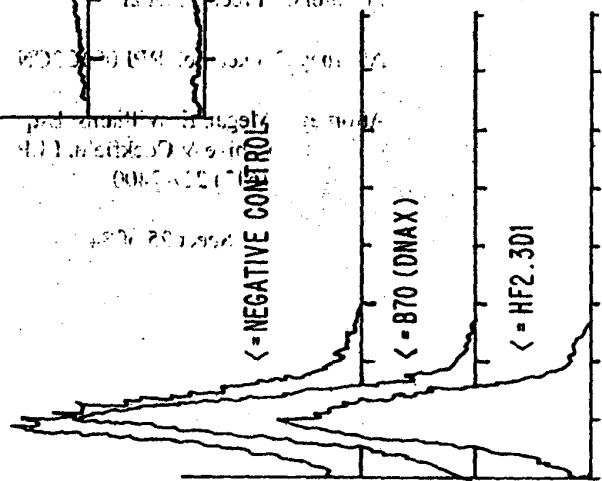


FIG. 19C



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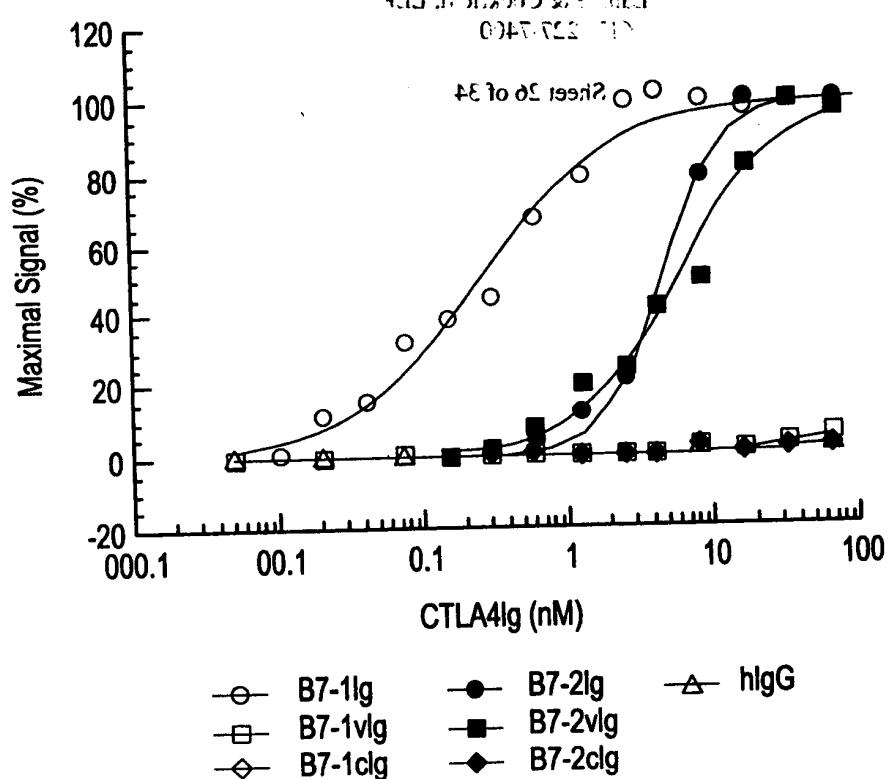
File Copy Report 369

Application No. 10/619561 Filed 11/13/2002

INVENTOR(S): HAN, JAE-HYUN & KANG, JAE-HYUN

ATTORNEY: KANG, JAE-HYUN

## FIG. 20





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FIG. 21A

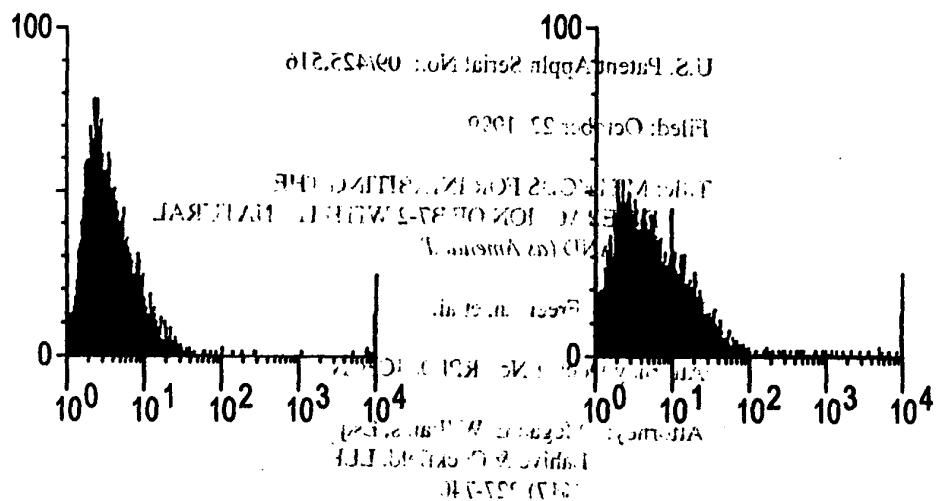
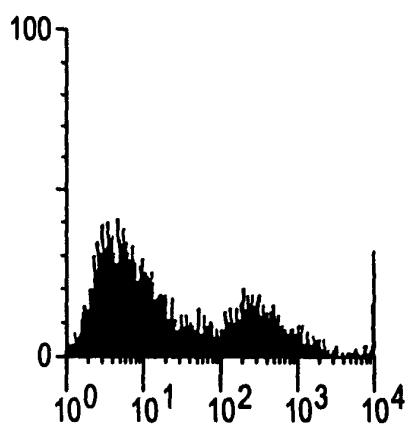


FIG. 21C



**FIG. 21B**

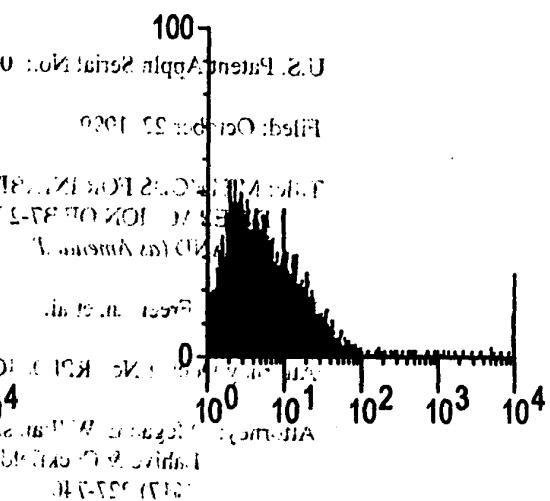


FIG. 21D

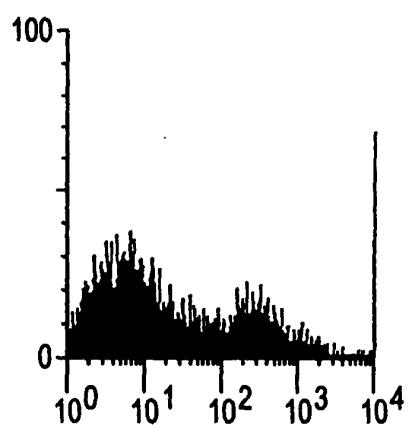
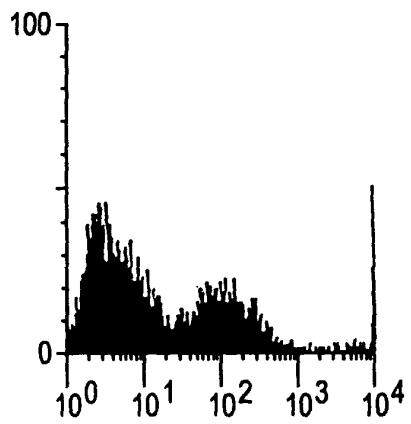


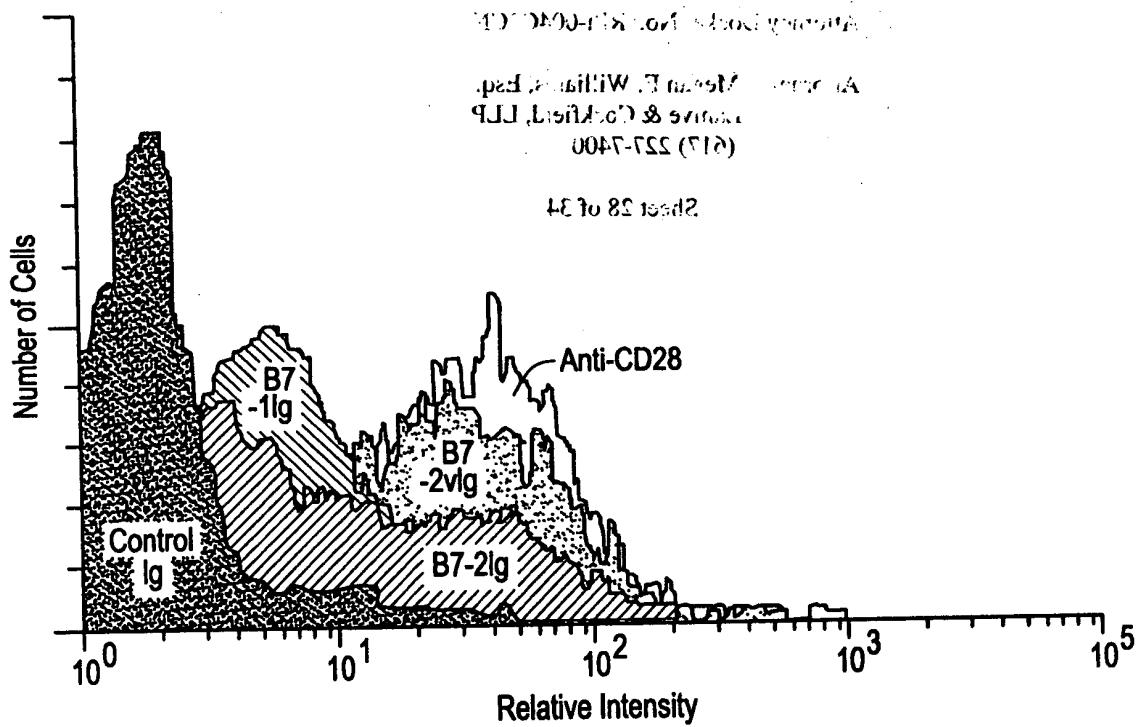
FIG. 21E





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## FIG. 22

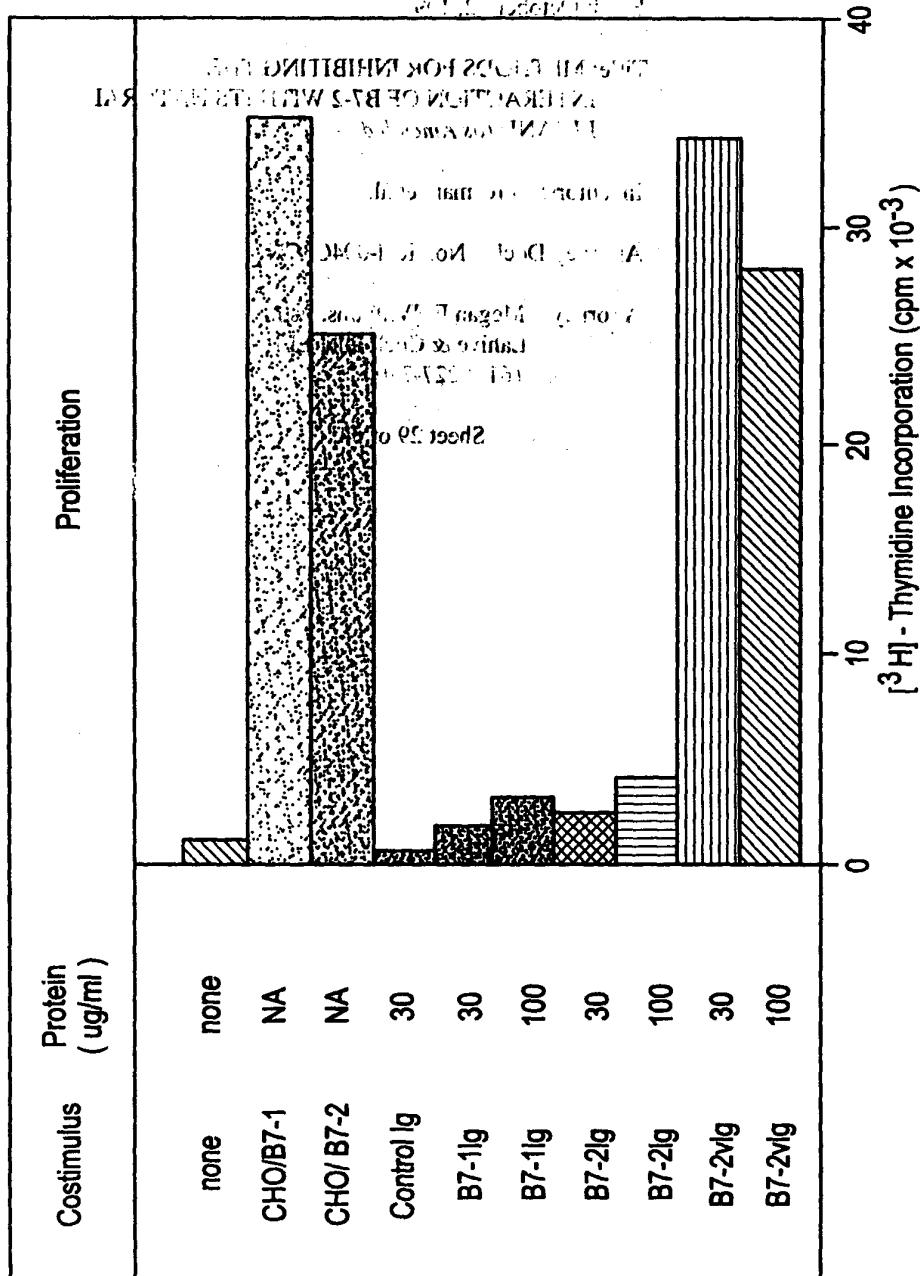


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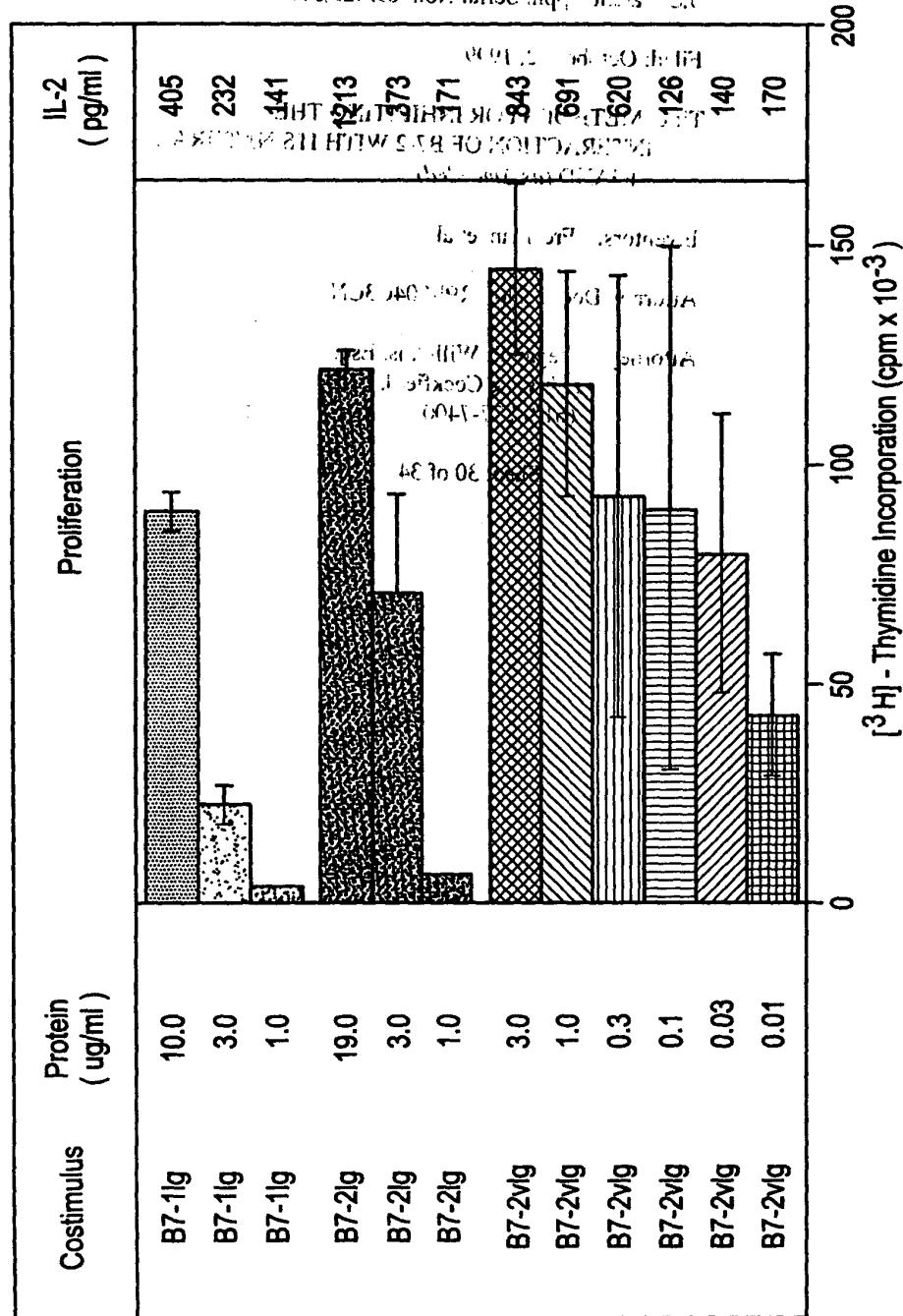
FIG. 23





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FIG. 24



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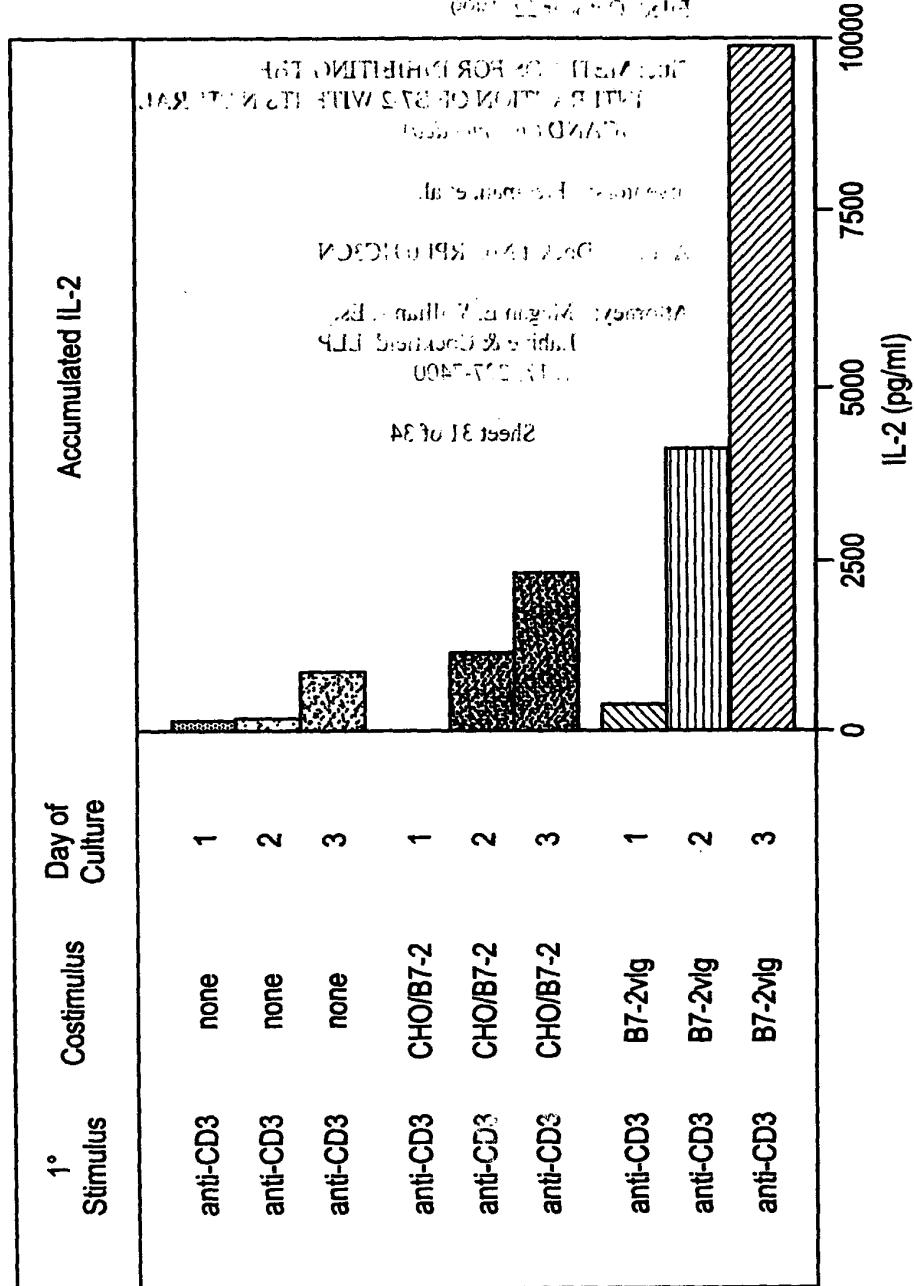
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U.S. Patent Appl. No. 09/452,816

Examiner: [unclear]

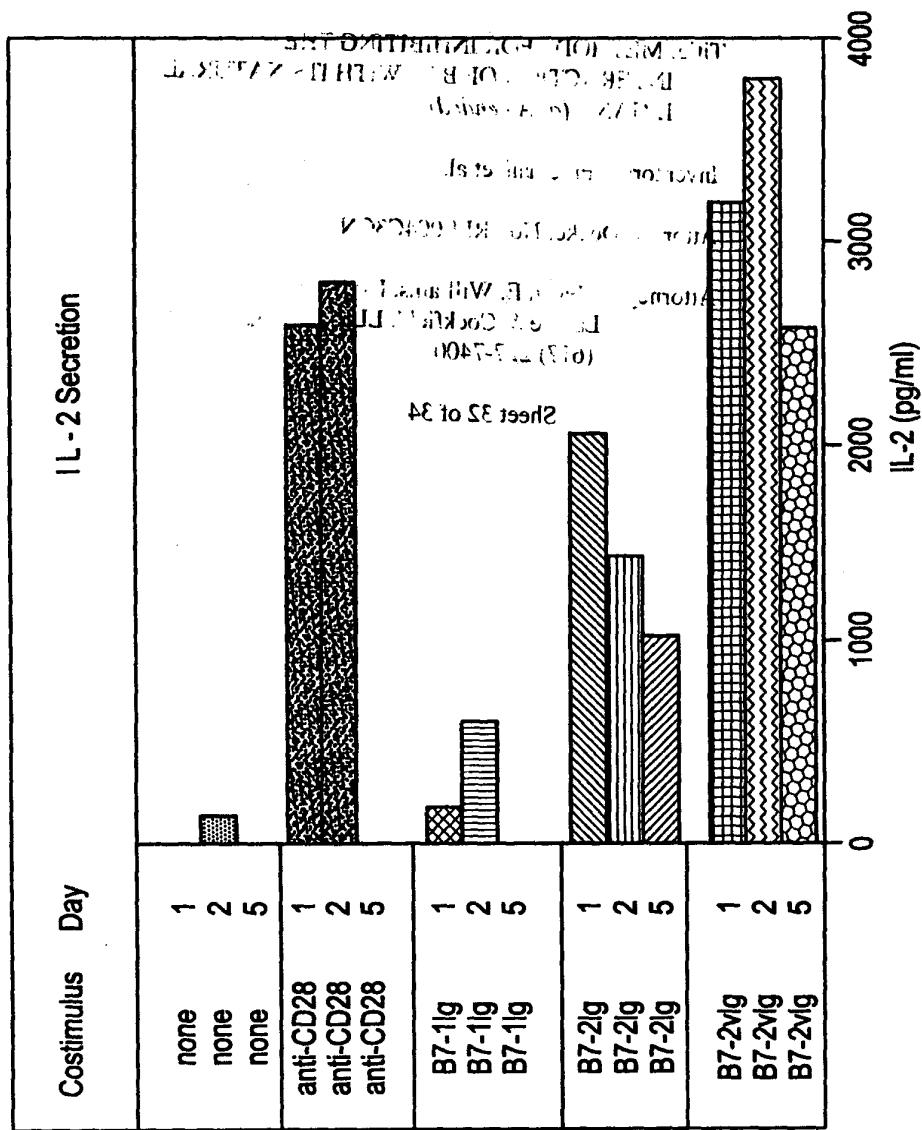
FIG. 25





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FIG. 26





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## FIG. 27

